**3.4 – Predicting Products of Reactions – Practice**

For the following reactions, predict the products and balance the equations.

Synthesis

1. \_\_\_ Na + \_\_\_ O2 🡪
2. \_\_\_ NaCl + \_\_\_ O­2 🡪
3. \_\_\_ BeO + \_\_\_ CO2 🡪

Single Replacement

1. \_\_\_ Al + \_\_\_ Pb(NO3)2 🡪
2. \_\_\_ Cu + \_\_\_ AlCl3 🡪
3. \_\_\_ I2 + \_\_\_ MgCl2 🡪
4. \_\_\_ Br2 + \_\_\_ CaI2 🡪
5. \_\_\_ Al + \_\_\_ HCl 🡪

Double Replacement

1. \_\_\_ Ca(OH)2 + \_\_\_ H3PO4 🡪
2. \_\_\_ Na2CO3 + \_\_\_ H2SO4 🡪
3. \_\_\_ Al2(SO4)3 + \_\_\_ Ca3(PO4)2 🡪
4. \_\_\_ Co(OH)3 + \_\_\_ HNO3 🡪
5. \_\_\_ K2CO3 + \_\_\_ BaCl2 🡪

Decomposition

1. \_\_\_ K3N 🡪
2. \_\_\_ BaCO3 🡪
3. \_\_\_ H2O 🡪

Combustion

1. \_\_\_ C6H6 + \_\_\_ O2 🡪
2. \_\_\_ C25H52 + \_\_\_ O2 🡪
3. \_\_\_ C4H9OH + \_\_\_ O2 🡪

Acid-Base

1. \_\_\_ HBr + \_\_\_ KOH 🡪
2. \_\_\_ HNO3 + \_\_\_ Ca(OH)2 🡪

Predict the products of the following reactions, and identify the reaction type.

1. \_\_\_ Ca + \_\_\_ Cl2 🡪
2. \_\_\_ C3H8 + \_\_\_ O2 🡪
3. \_\_\_ BaBr2 + \_\_\_ AlPO3 🡪
4. \_\_\_ KNO3 + \_\_\_ Al 🡪
5. \_\_\_ Li + \_\_\_ CaO 🡪
6. \_\_\_ Al + \_\_\_ Cl2 🡪
7. \_\_\_ MgCl2 + \_\_\_ O2 🡪
8. \_\_\_ CuO 🡪
9. \_\_\_ Fe(NO3)2 + \_\_\_ Na3PO4 🡪
10. \_\_\_ Al + \_\_\_ H2SO4 🡪
11. \_\_\_ Zn + \_\_\_ Ca(NO3)2 🡪
12. \_\_\_ C10H21OH + \_\_\_ O2 🡪
13. \_\_\_ H2SO4 + \_\_\_ NaOH 🡪
14. \_\_\_ PbO2 🡪
15. \_\_\_ Mg + \_\_\_ HCl 🡪
16. Hydrogen phosphate and calcium hydroxide react
17. Hydrogen iodide decomposes
18. Carbon dioxide reacts with water
19. Chlorine is combined with aluminum fluoride